

## **REMARKS**

Entry of the foregoing amendment is respectfully requested. The Amendment is believed to place the application in condition for allowances and is, therefore, appropriate under Rule 116. The Amendment does not raise any new issues and, thus, does not require an additional search by the Examiner. The issues raised by the amended claim 54 are the same issues raised by the presently pending claims 54 and 56.

The Amendment was not earlier presented because applicant became familiar with new grounds for rejection only after they were first set forth in the final Office Action.

By the present amendment, claim 56 is canceled, and claim 54 is amended.

Based on the foregoing amendments and the following remarks, the application is deemed to be in condition for allowance and action to that end is respectfully requested.

The Examiner rejected claims 54-103 as anticipated by Horn, U.S. Patent No. 5,512,602 (Horn). It is respectfully submitted that claims 54, 55 and 57-103 are patentable over Horn.

As discussed in the specification, the presence of the aqueous polymer dispersion is a necessary requirement providing a surprising technical effect, namely the foamed product having substantially improved properties. It has been found that the addition of the aqueous polymer dispersion to the polyol component (A) of the two-component foam system results in the technical effect that when combining component (A) with the isocyanate component (B), the polymer comprised in the aqueous polymer dispersion is coagulated and precipitated in the reacting and foaming polyurethane mass. The polymer precipitated from the aqueous dispersion is during this reaction stretched in the direction in which the foam expands, which has the surprising effect that the foam adopts an unisotropic, fiber-like structure, having a surprisingly improved strength property in this direction. Depending on the geometry of the surrounding mold, in which the foam composition is foamed, it becomes possible to not only increase the stability of the foam by the formation of said fiber-like foam structure but also to selectively increase the stability of the foam

in a particular direction. For example, when foaming the composition in an allongated mold, it is possible to obtain a foam, which has a higher strength in the longitudinal direction of the container than in the transverse direction.

This substantially improved foam stability manifests in a corresponding gel formation, preventing the foamed material to drip immediately after foaming.

This technical effect is obtained, however only in case the amount of water present in the two-component system is substantially higher than what is needed to provide the foaming effect. This effect is clearly demonstrated by the experimental data submitted with the response dated March 21, 2005. As can be taken from these data, when using a reduced amount of the aqueous polymer dispersion and thus a water content below the lower limit defined in claim 1, such as 5.6 parts by weight per 100 parts by weight Pluracol, a foam is obtained, which shows a substantially less foam height in comparison to the product obtained with a water content of 39.8 parts by weight per 100 parts by weight of Pluracol. This comparative foam also does not comprise the fiber structure in the foamed material and no gel formation and thus is substantially inferior in its mechanical properties.

Therefore, it is respectfully submitted that the subject matter claimed by the combination of the aqueous polymer dispersion with the higher water content yields a surprising technical effect, which was not to be expected on the basis of the disclosure of the prior art.

Horn, et al., U.S. Patent 5,512,602 does not disclose the use of an aqueous polymer dispersion besides the necessary components for producing the polyurethane foam, namely the polyol component, the polyisocyanate component and the blowing agent and, if necessary, further optional ingredients. Apart from this, the skilled person cannot take from the disclosure of this document that when using an aqueous polymer dispersion as an additional component in the composition, a surprising technical effect, as demonstrated by the comparative data on file, can be obtained, specifically when at the same time keeping the amount of the water in the composition above what is necessary for foaming the two-component foam system.

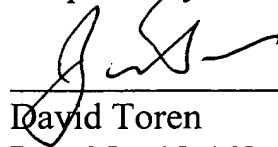
In view of the above, it is respectfully submitted that claim 54 is patentable over Horn and is allowable. Claims 55 and 57-103 depend on Claim 54 and are allowable as being dependent on an allowable subject matter.

## CONCLUSION

In view of the foregoing, it is respectfully submitted that the application is in condition for allowance, and allowance of the application is respectfully requested.

Should the Examiner require or consider it advisable that the specification, claims and/or drawing be further amended or corrected in formal respects, in order to place in case in condition for final allowance, it is respectfully requested that such amendment or correction be carried out by Examiner's amendment and the case passed issue. Alternatively, should the Examiner feel that a personal discussion might be helpful in advancing this case to allowance, the Examiner is invited to telephone the undersigned.

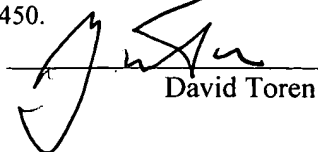
Respectfully submitted,



David Toren  
Reg. No. 19,468

Dated: August 4, 2005  
Abelman, Frayne & Schwab  
666 Third Avenue, 10<sup>th</sup> Floor  
New York, NY 10017-5621  
Tel.: (212) 885-9383

This correspondence is being deposited with the United States Postal Service on August 4, 2005 in an envelope as "Express Mail Post Office to Addressee" Mailing Label Number **ER 843 204 745** US addressed to the Honorable Commissioner for Patents, Alexandria, VA 22313-1450.



David Toren